

**FTU=s, T=3\*FTU, B=2, S=12, FTU=120 Picosecond Modulation Example**

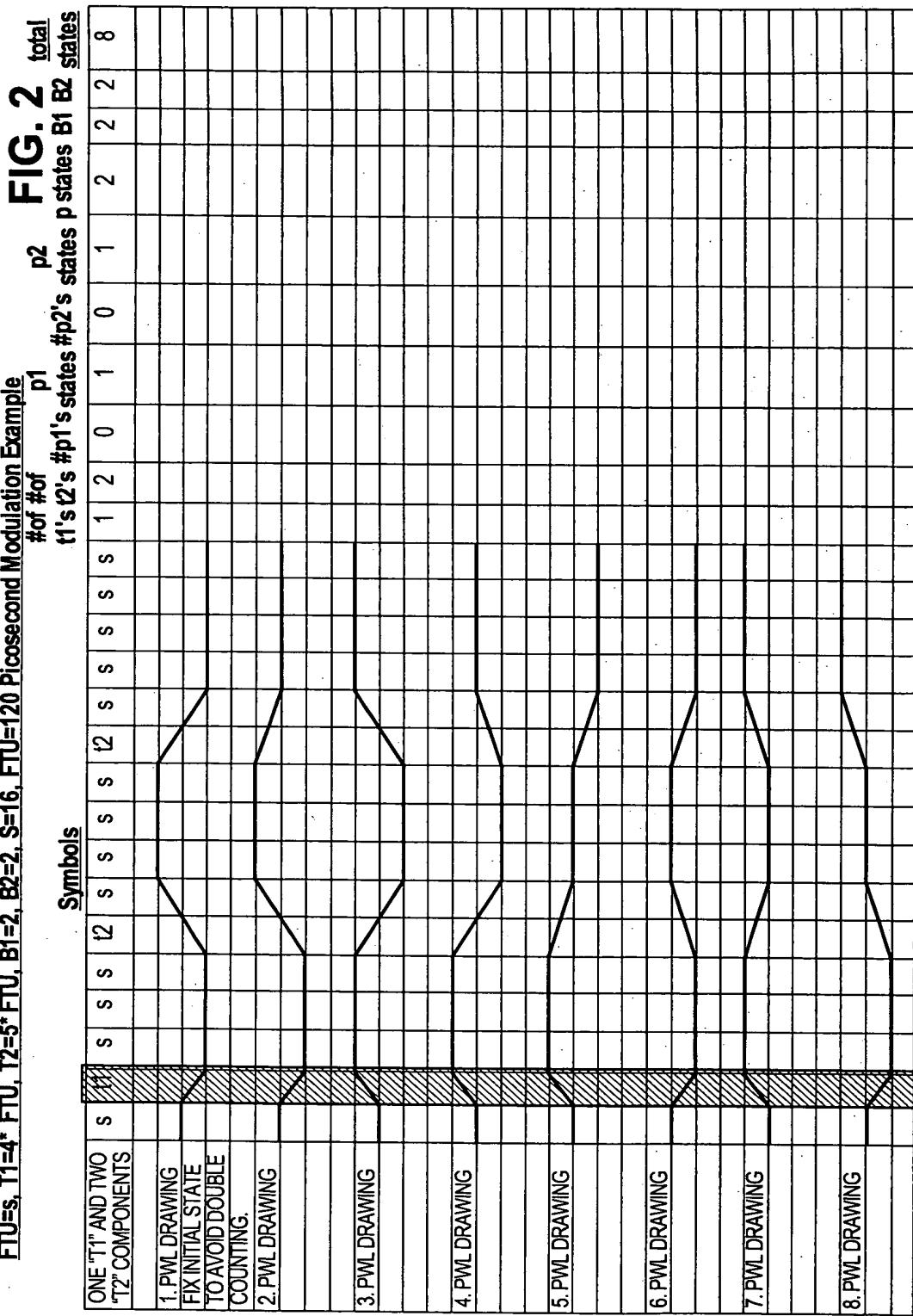
# edges	Symbols	# of 's	# of p's	# of p states	total states	Comments
0-edge	θ	θ	θ	θ	1	Don't use this state
1 edge	p p p p p p p p p p p p	θ	θ	θ	10	+
2 edge	t s s p p p p p p p p	1	9	10	20	
2 edge	s t s s p p p p p p p	2	6	6	28	
2 edge	s s t s p p p p p p p	2	5	5	24	
2 edge	s s s t p p p p p p p	2	4	4	20	
2 edge	s s s s t p p p p p p	2	3	3	16	
2 edge	s s s s s t p p p p p	2	2	2	12	
2 edge	s s s s s s t p p p p	2	1	1	8	
2 edge	s s s s s s s t p p p	2	0	0	4	
3 edge	t s s t s p p p p p p	3	3	3	32	
3 edge	t s s t s p p p p p p	3	2	2	24	
3 edge	t s s t s p p p p p p	3	1	1	16	
3 edge	t s s t s p p p p p p	3	0	0	8	
3 edge	s t s t s p p p p p p	3	2	3	24	
3 edge	s t s t s p p p p p p	3	1	1	16	
3 edge	s t s t s p p p p p p	3	0	0	8	
3 edge	s t s t s t s p p p p	3	2	3	24	
3 edge	s t s t s t s p p p p	3	1	1	16	
3 edge	s t s t s t s p p p p	3	0	0	8	
3 edge	s t s t s t s t s p p	3	1	1	16	
3 edge	s t s t s t s t s p p	3	0	0	8	
3 edge	s t s t s t s t s t s	3	0	0	8	
4 edge	t s s t s t s t s t s	4	0	0	1	16 "Binary"

Total p states	59	1 Edge P States	12
Total States	308	2 Edge P States	6.94E+08
Total mod	8.266786541	3 Edge P States	5.56E+09
Total trunc mod	8	4 Edge P States	1.33
			2.00
		Payload Ratio	
		Payload Ratio versus "binary"	

**FIG. 1**

FTU=s, T1=4\* FTU, T2=5\* FTU, B1=2, B2=2, S=16, FTU=120 Picosecond Modulation Example

**FIG. 2**



**FIG. 3**

**FTU=s, T1=4\*FTU, T2=5\*FTU, B1=2, B2=2, S=16, FTU=120 Picosecond Modulation Example**

Clock CkEdge#	S#	# edges	Symbols	# of 11's				# of 12's				#p1's				#p2's				p1's states				p2's states				B1				B2				total			
				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
1T1	1	p1	p1	p1	p1	p1	p1	p1	p1	p1	p1	p1	p1	p1	p1	p1	p1	p1	p1	p1	p1	p1	p1	p1	p1	p1	p1	p1	p1	p1	1	14	2	2	26				
2T1	1	p1	p1	p1	p1	p1	p1	p1	p1	p1	p1	p1	p1	p1	p1	p1	p1	p1	p1	p1	p1	p1	p1	p1	p1	p1	p1	p1	p1	p1	1	10	2	2	36				
2T1	2	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	1	9	2	2	32			
2T1	3	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	1	8	2	2	28			
2T1	4	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	1	7	2	2	24			
2T1	5	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	1	6	2	2	20			
2T1	6	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	1	5	2	2	16			
2T1	7	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	1	4	2	2	12			
2T1	8	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	1	3	2	2	8			
2T1	9	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	1	2	2	2	4			
2T1	10	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	1	1	2	2	26			
2T1	11	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	1	1	1	1	36			
2T1	12	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	1	1	1	1	32			
2T1	13	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	1	1	1	1	32			
2T1	14	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	1	1	1	1	32			
2T1	15	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	1	1	1	1	32			
2T1	16	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	1	1	1	1	32			
3T1	1	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	1	1	1	1	32			
3T1	2	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	1	1	1	1	32			
3T1	3	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	1	1	1	1	32			
3T1	4	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	1	1	1	1	32			
3T1	5	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	1	1	1	1	32			
3T1	6	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	1	1	1	1	32			
3T1	7	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	1	1	1	1	32			
3T1	8	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	1	1	1	1	32			
3T1	9	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	1	1	1	1	32			
3T1	10	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	1	1	1	1	32			
3T1	11	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	1	1	1	1	32			
3T1	12	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	1	1	1	1	32			
3T1	13	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	1	1	1	1	32			
3T1	14	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	1	1	1	1	32			
3T1	15	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	1	1	1	1	32			
3T1	16	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	1	1	1	1	32			

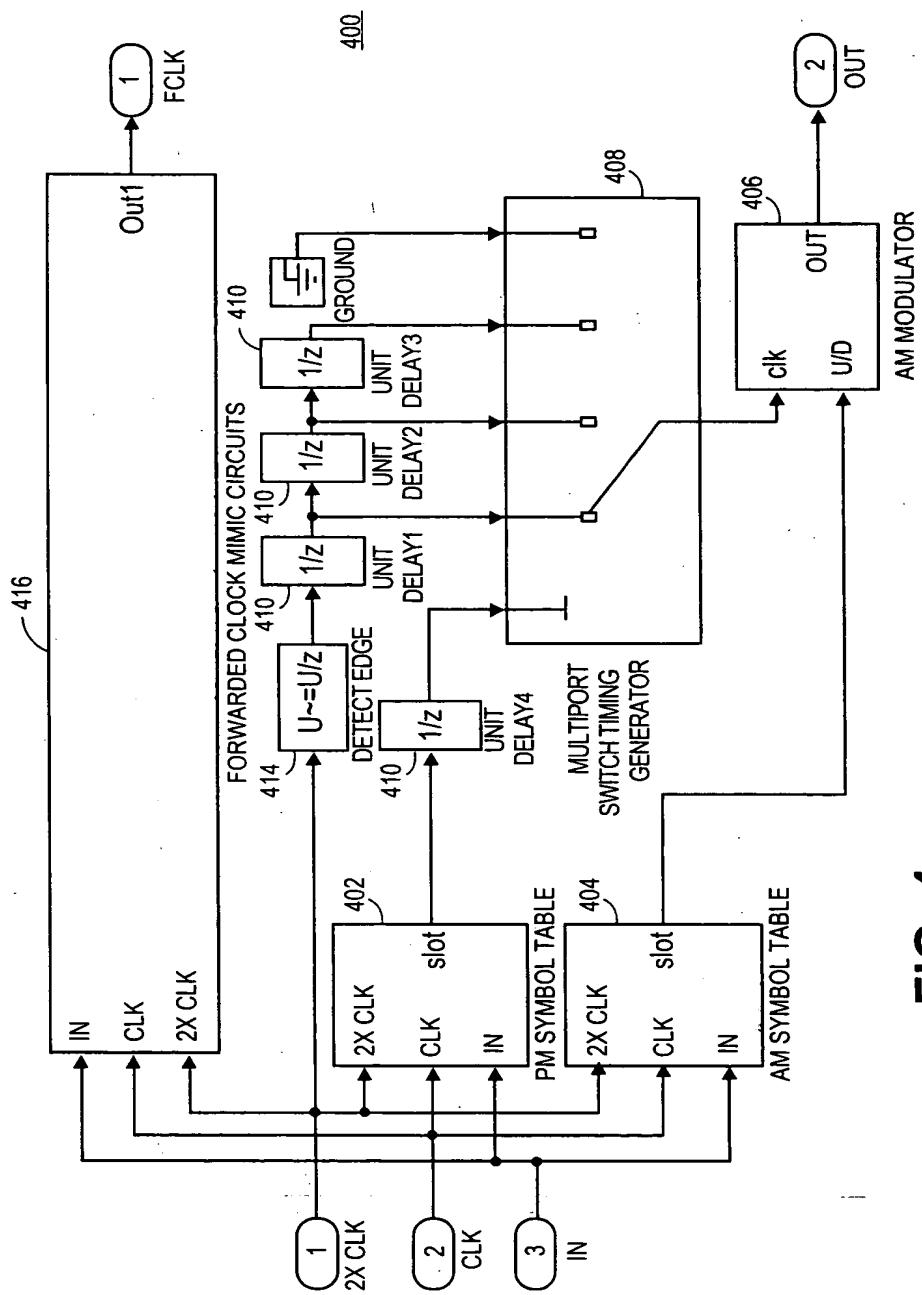
FIG. 3 (cont.)

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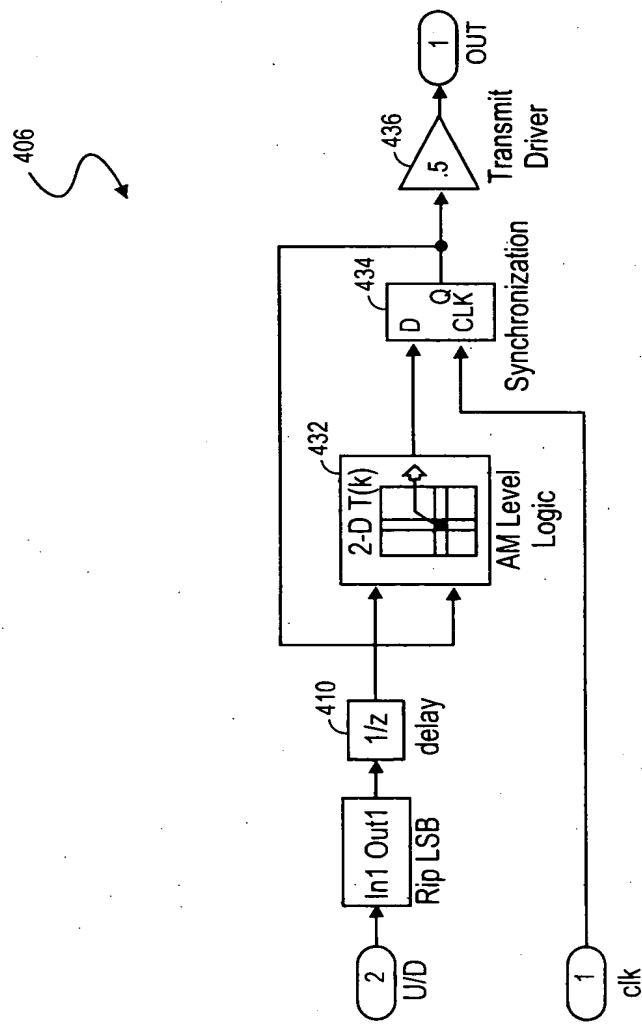
FIG. 3 (cont.)

Total p states	401
Total States	1678
Total mod	1.0712527000439800E+01
Total trunc mod	10
columns	16
frequency	5.21E+08
Payload	5.58E+09
Payload Ratio	1.34
Payload Ratio (Truncate)	1.2844987615765900E+00

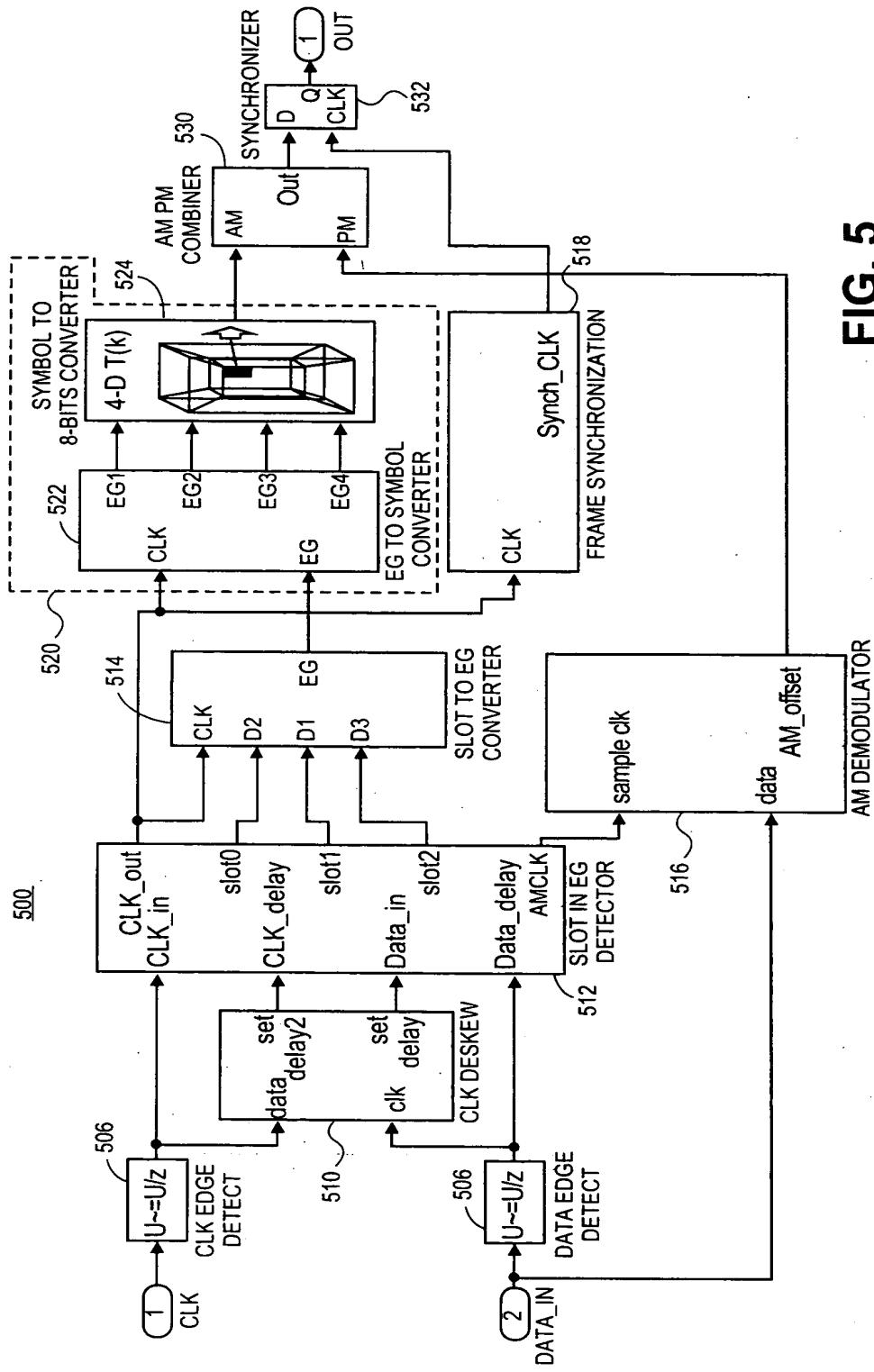
**FIG. 3 (cont.)**



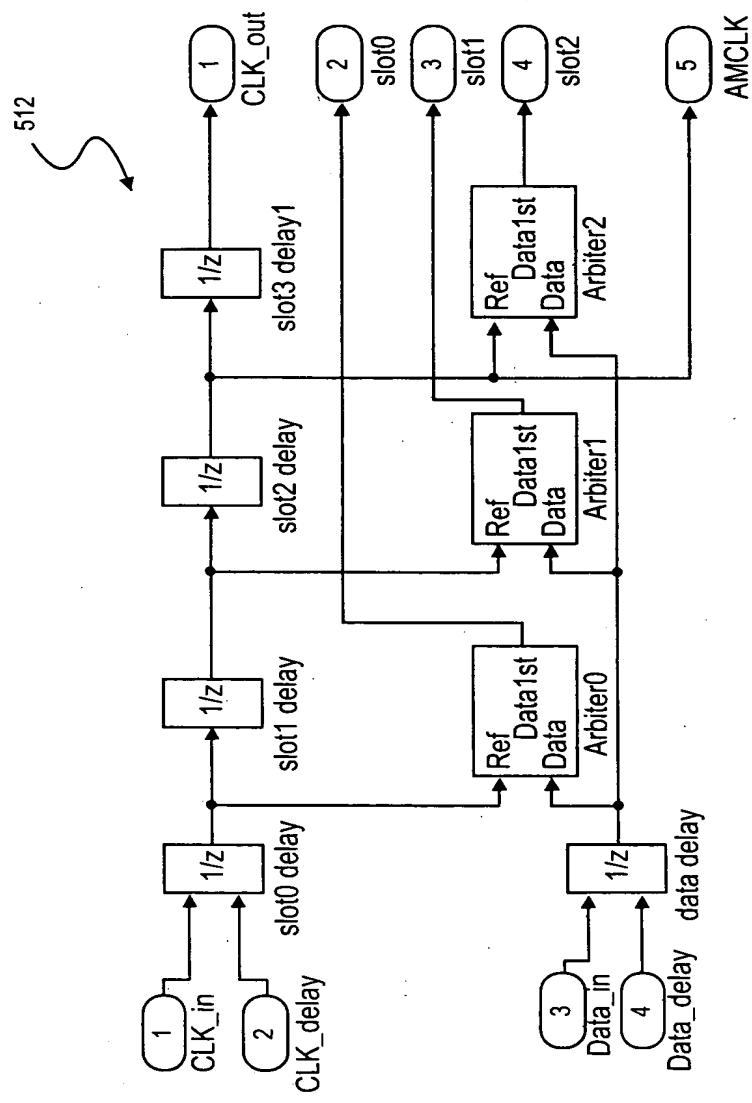
**FIG. 4**



**FIG. 4A**

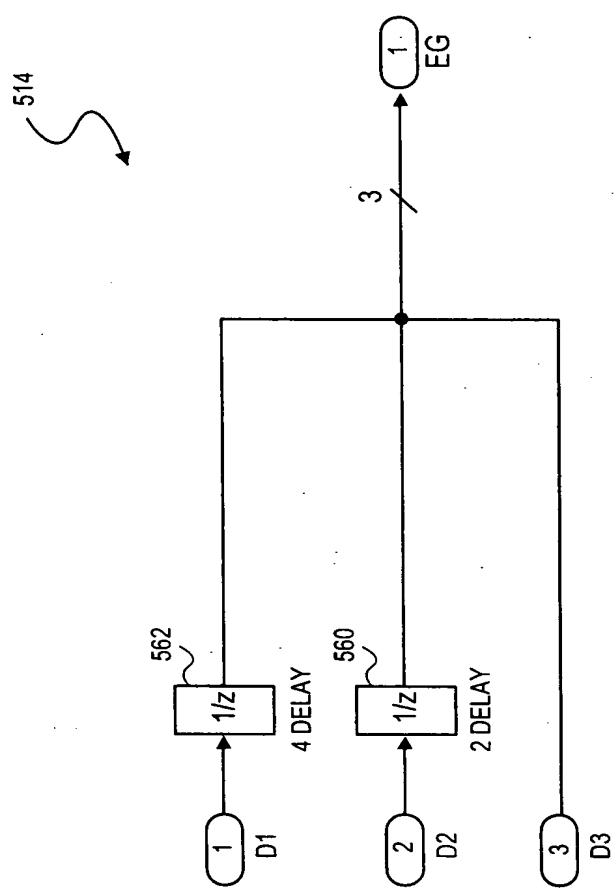


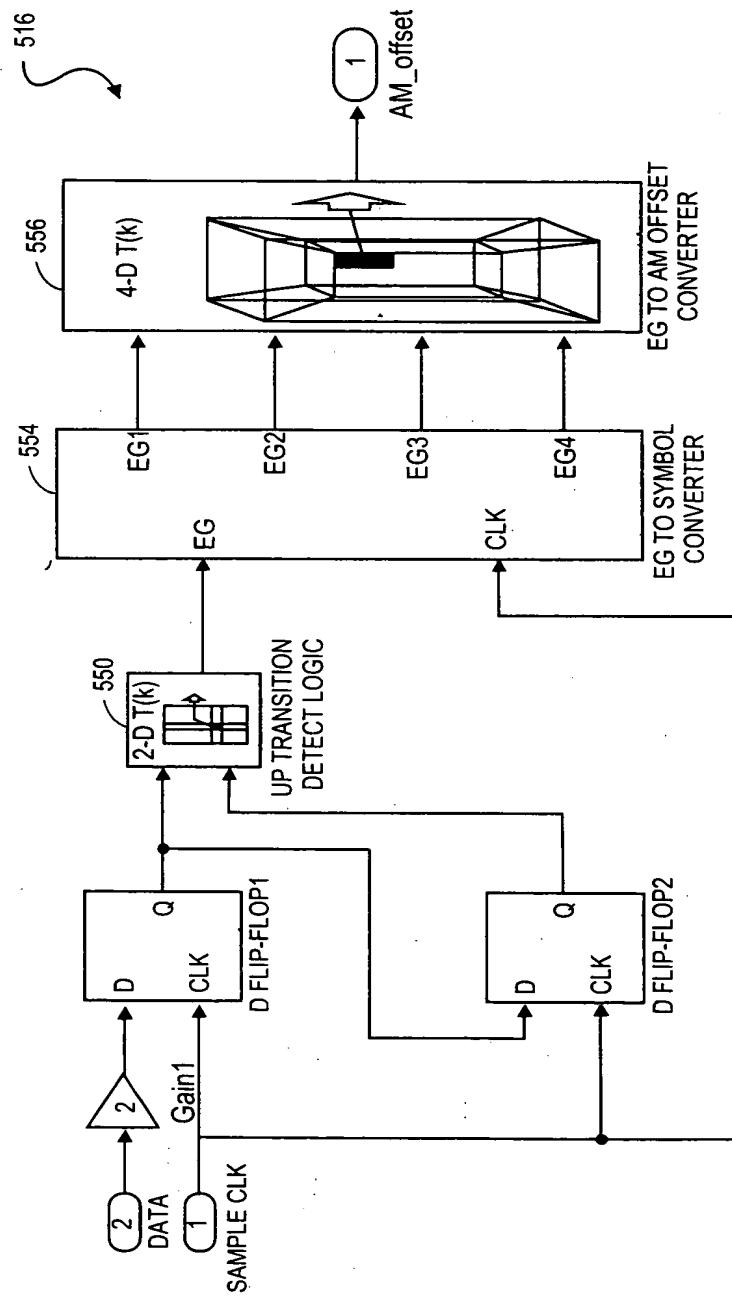
5  
FIG



**FIG. 5A**

**FIG. 5B**



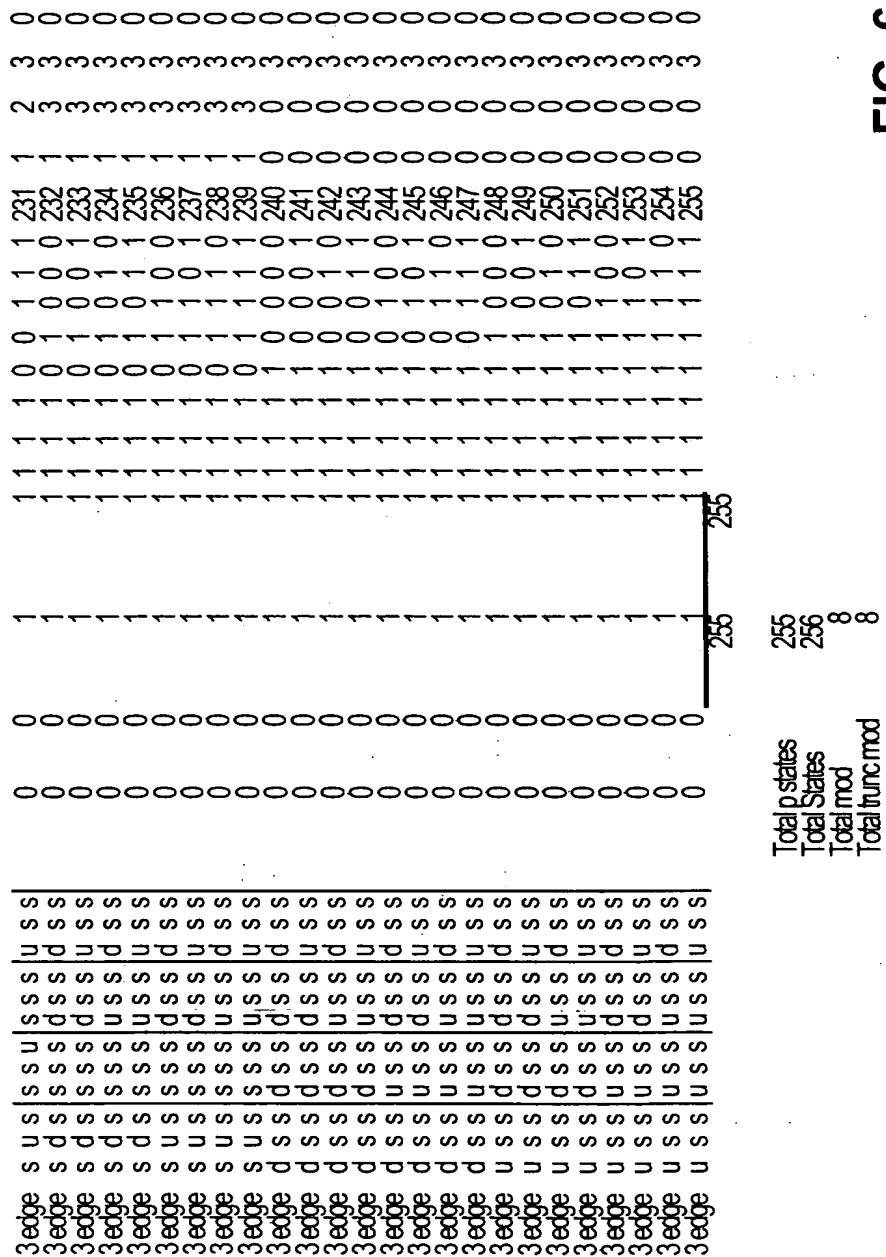


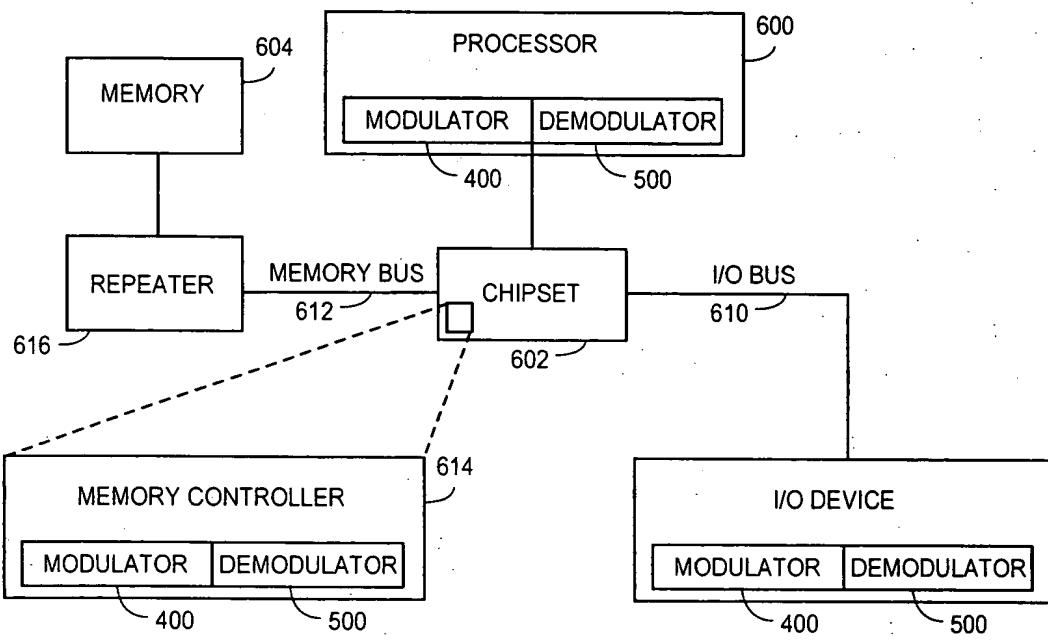
**FIG. 5C**

FTU=S,T=3\* FTU,B=2,S=12,FTU=120 Picosecond Modulation Example

**FIG. 6**

FIG. 6 (cont.)





**FIG. 7**